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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,796	09/18/2001	Ed O. Schlotzhauer	10010804-1	1044

7590 06/26/2008

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EXAMINER	
WEST, JEFFREY R	

ART UNIT	PAPER NUMBER
2857	

MAIL DATE	DELIVERY MODE
06/26/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/955,796	SCHLOTZHAUER ET AL.	
	Examiner	Art Unit	
	JEFFREY R. WEST	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 March 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29 and 31-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29 and 31-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Objections

2. Claim 24 is objected to because of the following informalities:

   In claim 24, line 2, "instruction if operable" should be ---instruction is operable---.

   Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 7-9, 14-29, 31-33, and 36-40 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,401,220 to Grey et al.

With respect to claim 1, Grey discloses a method for a user of a measurement process to cause a variation in the measurement process (column 33, lines 38-46 and column 37, lines 10-19), the measurement process comprising a sequence of operations controlled by a computer program (column 5, lines 53-57 and column 7, lines 18-30) containing a variation point at which a function call instruction is inserted by a designer of the computer program (column 20, lines 58-65) to pass control to a user-defined variation function (column 20, lines 58-65 and column 33, lines 38-46), said method comprising determining the variation to the measurement process (column 20, lines 58-65), providing a user-generated process modification software module comprising the user-defined variation function for causing the variation (column 20, lines 58-65, column 33, lines 38-46, and column 37, lines 10-19), and associating the function call instruction with the user-defined variation function (column 17, lines 25-29, column 18, lines 4-17, and column 20, lines 58-65), generating an executable variation of the measurement process (column 18, lines 4-17) wherein the function call instruction passes control to the user-defined variation function when the variation point in the computer program is reached (column 18, lines 4-17 and column 20, lines 58-65) and wherein the user is prevented from modifying the measurement process other than through the user-defined variation function (column 32, lines 14-16 and column 34, lines 15-40), said user being

different from said designer (i.e. "sequence developer" different from the "user") (column 20, lines 58-65).

With respect to claim 2, Grey discloses that the process modification software module further comprises an interface servicing element that services an interface realized by the measurement process (column 12, lines 41-48, column 13, lines 50-62, and column 15, lines 15-17).

With respect to claim 3, Grey discloses that said interface operates in accordance with a predetermined protocol (column 12, lines 41-48, column 13, lines 50-62, and column 15, lines 15-17).

With respect to claim 4, Grey discloses that said predetermined protocol is specified at a binary level (column 12, lines 41-48, column 13, lines 50-62, and column 15, lines 15-17).

With respect to claim 7, Grey discloses that said interface has an identity which is determined by the user and said identity is identified and passed into said measurement process (column 12, lines 41-48, column 13, lines 50-62, and column 18, lines 4-16 and 28-37).

With respect to claim 8, Grey discloses that said process modification software module is one of a computer program conforming to a software component specification for distributed applications or dynamically linked library (i.e. C, C++, JAVA, Visual Basic) (column 13, lines 53-57 and column 14, lines 66-67).

With respect to claim 9, Grey discloses that the measurement process and the process modification software module are executed in a shared computer memory

space (i.e. the test executive software performs the measurement and the measurement modification) (column 11, lines 41-56 and column 58, lines 60-67)

With respect to claim 14, Grey discloses that said variation comprises modification of data (column 15, lines 11-14).

With respect to claim 15, Grey discloses that said variation comprises modification of one or more numerical parameters of the measurement process (i.e. voltages) (column 30, lines 49-52 and column 46, lines 30-35).

With respect to claim 16, Grey discloses that said variation comprises modification of one or more control parameters of the measurement process, wherein one or more alternatives within the measurement process may be selected (column 19, lines 33-39 and column 21, lines 5-11).

With respect to claim 17, Grey discloses that said measurement process is applied to a device under test and said variation comprises alteration of a configuration of the device under test (column 18, lines 62-63 and column 19, lines 33-39).

With respect to claim 18, Grey discloses that said measurement process is applied to a device under test and said variation comprises causing input signals to be supplied to the device under test (column 10, line 62 to column 11, line 6 and column 19, line 64 to column 20, line 5).

With respect to claim 19, Grey discloses that said computer program contains a plurality of variation points and said process modification software module comprises a plurality of user-defined functions and wherein each of the plurality of variation

points is associated with one of the plurality of user-defined functions (column 13, lines 16-25 and 32-44, column 14, lines 52-65, column 18, lines 28-37 and 49-54, and column 33, lines 38-46).

With respect to claim 20, Grey discloses that said computer program contains a plurality of variation points and a plurality of process modification software modules are provided, each of the plurality of process modification software modules comprising at least one user-defined variation function and wherein each of the plurality of variation points is associated with one of the at least one user-defined variation functions (column 13, lines 16-25 and 32-44, column 14, lines 52-65, column 18, lines 28-37 and 49-54, and column 33, lines 38-46).

With respect to claim 21, Grey discloses a computer readable medium containing program instructions which, when executed on a computer, control a measurement process, said instructions comprising (column 11, lines 41-56): an executable variation of the measurement process (column 33, lines 38-46 and column 37, lines 10-19), comprising: a first plurality of instructions generated by a designer of the program of instructions and operable to initiate the measurement process (column 12, line 41 to column 13, line 5); and a second plurality of instructions generated by the designer and operable to control the measurement process (column 5, lines 53-57 and column 7, lines 18-30), the second plurality of instructions including a function call instruction at a variation point (column 20, lines 58-65), the function call instruction being operable to pass control to a user- defined variation function generated by a user (column 20, lines 58-65 and column 33, lines 38-46), the user

being different from the designer of the program (i.e. "sequence developer" different from the "user") (column 20, lines 58-65); wherein the function call instruction passes control to the user-defined variation function when the variation point in the computer program is reached (column 18, lines 4-17 and column 20, lines 58-65) wherein the user- defined variation function is associated with the function call instruction prior to execution of the measurement process (column 17, lines 25-29, column 18, lines 4-17, and column 20, lines 58-65) and wherein the user-defined variation function operates to modify the measurement process and return control to the measurement process (column 18, lines 4-17, column 20, lines 58-65 and column 33, lines 38-46) and wherein the user is prevented from modifying the measurement process other than through the user-defined variation function (column 32, lines 14-16 and column 34, lines 15-40).

With respect to claim 22, Grey discloses that the function call instruction is operable to pass parameters to the user-defined variation function (column 14, lines 37-50).

With respect to claim 23, Grey discloses that the parameters comprise measurement data (column 14, lines 37-50).

With respect to claim 24, Grey discloses that the function call instruction if operable to receive parameters from the user-defined variation function (column 15, lines 11-14).

With respect to claim 25, Grey discloses that the parameters comprise control parameters, operable to select between a plurality of alternative instructions

controlling the measurement process (column 19, lines 33-39 and column 21, lines 5-11).

With respect to claim 26, Grey discloses that the parameters comprise numerical parameters, operable to modify the measurement process (i.e. voltages) (column 30, lines 49-52 and column 46, lines 30-35).

With respect to claim 27, Grey discloses that said measurement process is applied to a device under test and wherein the parameters comprise control codes, operable to cause signals to be supplied to the device under test (column 10, line 62 to column 11, line 6 and column 19, line 64 to column 20, line 5).

With respect to claim 28, Grey discloses that said measurement process is applied to a device under test and wherein the parameters comprise control codes, operable to alter the configuration of the device under test (column 18, lines 62-63 and column 19, lines 33-39).

With respect to claim 29, Grey discloses that the function call instruction invokes an interface (column 12, lines 41-47).

With respect to claim 31, Grey discloses that the user-defined variation function provided by the user of the measurement process is accessed via an interface (column 12, lines 41-48, column 13, lines 50-62, and column 15, lines 15-17).

With respect to claim 32, Grey discloses that said interface operates according to a predetermined protocol (column 12, lines 41-48, column 13, lines 50-62, and column 15, lines 15-17).

With respect to claim 33, Grey discloses that said predetermined protocol is specified at a binary level (column 12, lines 41-48, column 13, lines 50-62, and column 15, lines 15-17).

With respect to claim 36, Grey discloses that said interface is determined by the user and wherein said instructions further comprise instructions to identify the interface (column 12, lines 41-48, column 13, lines 50-62, and column 18, lines 4-16 and 28-37).

With respect to claim 37, Grey discloses that the user-defined variation function is implemented as one of a software component specification for distributed applications or dynamically linked library (i.e. C, C++, JAVA, Visual Basic) (column 13, lines 53-57 and column 14, lines 66-67).

With respect to claim 38, Grey discloses that the second plurality of instructions includes a plurality of function call instructions passing control to a plurality of user-generated variation functions (column 13, lines 16-25 and 32-44, column 14, lines 52-65, column 18, lines 28-37 and 49-54, and column 33, lines 38-46).

With respect to claim 39, Grey discloses that said function call instruction is placed within second plurality of instructions at a variation point where the designer of the instruction program has anticipated that the user may want to interact with or modify the measurement process (column 20, lines 58-65, column 32, lines 14-16, column 33, lines 38-46)

With respect to claim 40, Grey discloses a measurement system comprising a physical interface operable to supply signals to a device under test and receive

signals from a device under test (Grey et al.; column 10, line 51 to column 11, line 34).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 5, 6, 10-13, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grey in view of U.S. Patent Application Publication No. 2002/0026514 to Ellis et al.

As noted above, the invention of Grey teaches many of the features of the claimed invention and while the invention of Grey does teach connecting the process-modifying host computer to a plurality of specific test instruments (Grey et al., Figure 1), Grey does not specifically indicate that the measurement and process modification be carried out using two separate computers communicating using a Simple Object Access Protocol or Common Object Request Broker Architecture protocol.

Ellis teaches automated tool management in a multi-protocol environment comprising measuring/polling software located on a server computer system with corresponding processor and memory (0025, lines 1-33) and user process control

software (0007, lines 1-16) located on a separate remote computer (0023, lines 1-18), wherein the process control software and the monitoring/polling software communicate over a network using predetermined protocol including Common Object Request Broker Architecture and Simple Object Access Protocol (0007, lines 1-16).

It would have been obvious to one having ordinary skill in the art to modify the invention of Grey to include specifying that the measurement and process modification be carried out using two separate computers communicating using a Simple Object Access Protocol or Common Object Request Broker Architecture protocol, as taught by Ellis, because, as suggested by Ellis, the combination would have provided improved analysis and control of the system of Grey by allowing input and diagnostics by a larger variety of users through remote access while reducing the burden of a user to be local to a UUT during testing (0005, lines 1-33 and 0008, lines 1-14).

Response to Arguments

7. Applicant's arguments with respect to claims 1-29 and 31-40 have been considered but are moot in view of the new ground(s) of rejection.

The Examiner notes that in response to Applicant's arguments, the Grey reference has been revisited to clearly point out the design of a measurement process program by a user with variation points allowing a sequence developer to modify the process through sequence developer created modules, and the

outstanding rejection has been modified accordingly with respect to the passages teaching such variation as well as passages teaching associated function calls, modules, interfaces, etc. The Examiner also notes that Grey considers two different types of "users", as disclosed in column 30, line 66 to column 31, line 7, by providing the ability for a “user” to prevent modification from "users".

The Examiner also asserts that the cited sections of Grey clearly disclose that the user is prevented from modifying the measurement process other than through the user-defined variation function (column 32, lines 14-16 and column 34, lines 15-40), as Grey discloses a user specifying locations where the sequence developer can modify the measurement process through user-defined variation functions, one having ordinary skill in the art would recognize that such a disclosure inherently indicates that modification elsewhere is prohibited, and additionally Grey discloses allowing the user to disable any modification, by the sequence developer, to the measurement process as desired. The Examiner does note, however, that U.S. Patent No. 6,449,741 to Organ et al. additionally indicates that it is well within the skill of one having ordinary skill in the art to allow a designer to selectively control modification of a test by preventing the user from modifying the test/measurement process/program (Organ et al.; column 13, lines 30-32 and column 14, lines 13-17).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

U.S. Patent No. 6,907,557 to Perez et al. (incorporating by reference U.S. Patent No. 6,401,220 to Grey et al.) teaches a system and method for testing a group of related products wherein a user is permitted to modify the measurement process by configuring parameters (Perez et al.; column 4, lines 49-63 and column 10, line 57 to column 11, line 14), such as the parameters used through the user-defined variation function (Grey et al.; column 14, lines 52-65), while preventing the user from modifying the measurement process through particular sequences (Perez et al.; column 4, lines 49-63 and column 10, line 57 to column 11, line 14).

U.S. Patent No. 6,449,741 to Organ et al. teaches a single platform electronic tester comprising means for controlling testing of a DUT (column 4, lines 26-34) using a program executed by a user (column 4, lines 45-55) wherein the user is allowed to arrange the flow of test execution (column 4, lines 56-64) for performing measurements (column 6, lines 29-32) while the operator is allowed to selectively control modification of the test by preventing the user from modifying the test/measurement process/program (column 13, lines 30-32 and column 14, lines 13-17).

U.S. Patent No. 6,308,326 to Murphy et al. teaches run-time modules for dynamically adjusting computer operation.

U.S. Patent No. 6,769,114 to Leung teaches methods and apparatus for preventing software modification from invalidating previously passed integration tests.

U.S. Patent Application Publication No. 2003/0046665 to Ilin teaches a reusable software component for textually supplementing, modifying, evaluating, and processing procedural logic for a compiled host program at run-time.

U.S. Patent No. 6,766,514 to Moore teaches a compiler having real-time tuning, I/O scaling and process test capability.

U.S. Patent No. 6,351,843 to Berkley et al. teaches dynamically inserting a function into an application executable at runtime.

U.S. Patent No. 6,202,043 to Devoino et al. teaches a computer based system for imaging and analyzing a process system and indicating values of specific design changes.

U.S. Patent No. 6,163,879 to Mackey teaches an interface and method for facilitating writing and modifying of lines of programming code.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY R. WEST whose telephone number is (571)272-2226. The examiner can normally be reached on Monday through Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571)272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey R. West/
Primary Examiner, Art Unit 2857

June 26, 2008